Will That Next Promotion Harm You? Job-Level Relationship to Employee Health

By
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Abstract

Over the last few years, America has seen a shifted focus towards an overall healthier lifestyle. More corporations are now putting more health and wellness programs in place for their employees as they are realizing the importance of a healthy workforce. However, there is little corporate look into how the actual job-level of the employee is related to their physical health. This study investigates the relationship between job-level in a firm and physical health of the employee, as well as how the amount of stress associated with that job-level impacts this relationship. To investigate these relationships, I gather data by distributing a survey to part-time master students who have previously had, or currently have corporate experience. I find evidence that while job level does not have a significant relationship to physical health of the employee, stress and health are significantly related.

Key words: Job-level, employee health, physical health, stress

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1.0 Introduction

Many workers have the desire to advance their career by moving up the ranks in an organization. Getting an internal promotion or pursuing a higher-level job at another organization is often seen as a way to advance your career or achieve a higher status. However, understanding how various job-levels affect your physical health is beneficial to life planning, especially as new technology allows employees to integrate their work and personal lives with a constant online connection. By being aware of the impact your job has on your health, you are better able to proactively protect yourself from any negative physical health effects that are related to any increase in job-level or responsibility within a firm.

It is likely that a job change will be accompanied by an increase in stress and physical toll. One example of the impact that job-level has on physical health can be seen in the men who have served as President of the United States. Looking at past United States presidents, it is astounding to see the physical deterioration of their health in the 4-8 years they serve in office. From their inauguration days to their last day in office, many Presidents are physically unrecognizable. While natural aging does change a person's appearance over time, it is widely believed that the enormous amount of stress of being the leader of the free world greatly speeds up this process and deteriorates their physical health at a faster rate. While most people do not have the amount of stress that the President of the United States has in their jobs, different levels of stress can have varied impacts on employee's physical health.

Previous research shows that stress (organizational stress and other types) greatly impacts both mental and physical health. There is also a wide variety of current research that investigates various types of jobs and their relationships to stress, however there is limited research on

whether job-level is related to overall employee stress. There is no research available that evaluates the actual relationship between job-level and physical health, and investigates how stress (a large impact on health) contributes to this relationship. This thesis aims to understand and evaluate the relationship between job-level and physical health of the employee, with stress as a mediator for this relationship. In summary, this study intends to answer the following research questions:

How is job-level related to physical health of the employee?

Is stress an explanation for this relationship?

The results of this study will help shed new light on between job-level and physical health of the employee. This study further expands the effects that work-life situations have on physical health of the employee. Current literature focuses a lot on work-life impact on mental health, but less on physical health in terms of the physical manifestation of stress on the employee. If any physical health effects are studied, they are usually measured by number of sick days or one-off illnesses caused by a temporary period of increased work stress. This study uses common somatic symptoms typically associated with stress as a measure of physical health.

This paper is divided into five additional sections. Section 2 includes an in-depth literature review of current research that has explored how jobs are related to stress, and how stress impacts physical health. There is also a discussion of the current gap in literature. In Section 3, the study design and methodology used to collect data for the thesis is discussed. Section 4 will reveal the results, and Section 5 will include a detailed discussion of the results. Lastly, in Section 6, conclusions and implications for future research are discussed.

2.0 Literature Review

In order to understand where my thesis fits into existing literature, I first reviewed current literature surrounding organizational stress, as well as literature that studies the relationship between stress and individual health. The first section of this literature review discusses the contradictory literature findings surrounding work and its relationship with stress. The second section of this literature review discusses how these stressors are related to physical health. Finally, I address gaps that exist surrounding the direct relationship between job level and physical health of the employee, and discuss the contribution of my thesis to already established research.

2.1 How Are Jobs Related to Stress?

When reviewing current literature on work and its relationship to stress, there are many studies that yield contradictory results. The term "executive stress" broadly suggests that employees in higher job levels experience more stress than those in lower level jobs. In order to assess job related stress, researchers have developed various models to quantify their results. A popular model widely used in literature is the Demand-Control model developed by Karasek (1979). His model hypothesizes that high job demands were not harmful themselves, but when accompanied by low decision latitude would result in the psychological strain associated with stress (1979). Karasek's research contradicts this concept of executive stress, and indicates that while employees at higher job levels may have higher job demands, they also tend to have higher decision latitudes and thus experience less strain that employees at lower levels of the organization (Karasek, 1979).

Another study performed by Parasuraman and Alutto (1981), found that actually not all employees experience stress that can be explained by this job level and decision latitude matrix.

Parasuraman and Alutto (1981) investigated work stressors among employees at three different job levels (low, middle, high) and found systematic differences in the pattern of work stressors across job levels. Meaning, that employees at different job levels reported different types of work stressors that lead to their feelings of strain. Managers and other high level employees experienced work overload and time constraint stressors, whereas middle and lower level employees experience stress related to specific job frustrations and technical problems. While Parasuraman and Alutto (1981)'s research investigated work stress and job-level, their research focused more on the varying types of stress involved at different job-levels in an organization rather than an overall stress relationship to job-level. On one hand, researchers disagree about the level and type of stress experienced, however most researchers agree there is evidence of some type of stress in high levels in an organization.

After reviewing current literature on the relationship between work and stress, I found there is not one outcome that all researchers agree on. Additionally, due to the many different types of stress and inestimable types of jobs, much current literature focuses on specific organizations or occupations when assessing the relationship between job and stress. There is not current literature investigating a cross-company or cross-industry relationship between job-level and stress.

2.2 Stress and its Relationship to Physical Health

There is a plethora of research that has determined that stressors have a major influence on mood, behavior, and health. Acute stressful events can induce changes in the nervous, cardiovascular, endocrine, and immune systems (Schneiderman, Ironson, Siegel, 2005). While acute stressful events are typically categorized as "traumatic" events, these vary among

individuals. What is considered an acute stressor to one individual might not constitute a traumatic stressor for another. Other studies have found that there is a strong relationship between non-acute stress and susceptibility to upper respiratory diseases – including the common cold. One study performed by Cohen et al. (1991) which controlled for varied exposure amounts that had been an issue in similar studies, exposed individuals to a rhinovirus and then quarantined them to isolate the effect of the virus. The results were that individuals with the most stressful life events and highest levels of perceived stress had the greatest probability of developing cold symptoms (Cohen et al., 1991).

Other more current research that yielded similar results examined work-related stress and its effect on the physical health of Norwegian airline employees. This study found that high-levels of work related stress were significantly associated with high scores on all subjective health complaints of the employees (M. L. Omholt, T. H. Tveito, C. Ihlebæk, 2017), further cementing the relationship between stress and negative health effects.

After a review of the current literature on this topic, I found that most research agrees stress is related to health, and higher levels of stress tends to incite negative health effects for individuals.

2.3 Gaps and Contribution to Existing Literature

The previous literature themes I reviewed makes it clear there is a gap in current literature. Current literature suggests a strong relationship between stress and physical health, but yields mixed results on the relationship between job level and stress. While there is research that studies the relationship between different jobs and stress, and stress and health, there is no research that directly assesses the relationship between job-levels and physical health of the

employees in that roles. My research intends to take into consideration the direct influence that job level has on physical health, and study how stress acts as a mediating variable in the relationship between job level and physical health.

3.0 Methodology

As many Americans work a majority of their lives, it is important to recognize and understand the relationship between how work is related to their physical health, as it influences their quality of life and longevity. Over the past few years America has seen a shifted focus towards an overall healthier lifestyle and increased work-life balance. However, even with the focus of a more well-balanced lifestyle, stress stemming from work can create implications for employees. It is common that with higher level jobs there are more responsibilities and larger workloads which can lead to an increase in stress. As widely studied in previous literature, stress has negative implications on a persons physical and mental health. This raises the question: is there a relationship between job-level and health of the employee?

This study tests three hypotheses regarding the relationships between job-level, stress, and physical health, evaluated using bivariate regression techniques. This section will outline my hypotheses, measurements, and conclude with a discussion of my methodology.

3.1 Hypotheses

As employees are promoted to higher job-levels, this often times comes with more responsibility and stress within the firm. Given the findings of previous literature regarding outcomes of job-level and stress in the workplace, I hypothesize that the higher an employee is based in a firm, the more adverse physical health effects they will experience. This motivates my first hypothesis:

Hypothesis 1: *A higher job level is negatively related to the physical health of the employee*

There is not much previous research on the direct relationship between job-level and physical health of the employee, however there is copious amounts of research focusing on various workplace stressors and how stress can lead to adverse physical health effects. Because of the strong relationship between stress and employee health, I expect that larger amounts of stress is the reason that job-level and physical health are negatively related. However, in order to evaluate the impact stress has on the relationship between job-level and physical health, I need to reaffirm that there actually is a relationship between stress and physical health. This brings me to my last hypotheses:

Hypothesis 2: *Stress is negatively related to the physical health of the employee*

Hypothesis 3: *Higher stress explains the negative relationship between job-level and physical health of the employee*

3.2 Data and Variables

In order to test the above hypotheses, I collected primary data using a survey aimed at part-time master program students at the Carlson School of Management and the Kellogg School of Management. This sample of master students represents the general population of employees in corporate settings, although the sample is likely younger than average (the average age of the sample is 29.7) and is based in the Midwest. This sample was chosen because most part-time

master level students have previous work experience or are currently working while pursuing their masters degree. In order to be selected, participants must have previously been or currently were employed at the time of data collection. Participants were able to opt-in to taking the on-line survey. In order to incentivize these part-time master-level students to participate in the survey, whomever completed the survey was entered into a raffle to win gift cards.

The survey was broken up into three parts: job-related questions, health-related questions, and demographic questions. In the job section, participants were asked to answer questions regarding their position in the organization, the number of subordinates their current or most recent position was responsible for, and how many hours a week participants typically spend on work. They were also asked to rank how often they experienced different types of stress at their jobs using a 5-point Likert Scale (never to always). There were four dimensions of job-related stress that included with multiple questions in each dimension, which are described below.

In the health section, participants answered questions regarding how often they experience certain physical symptoms, to what intensity, and general physical health questions. The physical symptoms that participants were asked to report are all common stress-related physical effects ("Stress Symptoms"). The demographic section contained basic demographic information to help analyze the sample who responded. The full survey can be referenced in Appendix A.

Independent Variables. Since the goal of Hypothesis 1 was to determine the relationship between different job-levels and their physical health effects on employees, job-level was considered to be the independent variable. Job-level for the participants is classified as a percentile of where the employee is at in the organization to account for the varying organizational structures and number of levels between different companies. For example, if a

participant indicates that there are 10 possible levels of employment in their organization and their current job is classified in level 2, they would be assigned 0.2 as their job level.

Additionally, since the goal of Hypothesis 2 was to determine the relationship between stress and the physical health of the employees, stress was also considered to be an independent variable when evaluating this hypothesis. Stress was measured based on the participant's responses relating to four dimensions of stress stemming from work (refer to Table 3 below).

Table 3: Stress Dimensions

Stress Dimension	Example Sub-Dimension
Pressure on the Job	Overloaded at work, unable to complete tasks during an average day
Work Overload Stress	Responsible for too many people/projects
Problem of Job Security	Fear of being laid off or fired
Job Barrier Stress	Sex/age discrimination exists at job

I then used these four dimensions to create an index of the participant's stress level by averaging their responses to all four dimensions

Dependent Variable. Since my hypotheses are looking at the outcome of physical health, the physical health of the employee is the dependent variable. Physical health of the employee was measured by the extent (no noticeable symptoms, mild, moderate, severe, or very severe) to which the participant experienced the following symptoms over the past three months, discounting any symptoms that are chronic for the individual: headache, muscle tension or pain, chest pain, fatigue, upset stomach, low energy, and sleep problems. Based on their responses, each participant was given two different aggregated "health" scores in order to capture different ways health can be measured.

Data for the dependent variable was used to measure health two different ways. Two different health scores for each participant were calculated to ensure validity of results, due to the somewhat subjective nature of health. The first health score was calculated based on the sum of the participant's overall experience and intensity for each of the 7 non-chronic health symptoms. This health score (hereinafter referred to as "SumHealth") was used to gauge the overall health experience of the participant based on the intensity of each non-chronic symptom. The second health score was based on the total experience of any of the 7 non-chronic health symptoms over the past 3 months, regardless of intensity of the symptom. This health score (hereinafter referred to as "TotalHealth Experience") was used to gauge the number of negative health symptoms experienced. With both ways health was measured, a higher health score indicates poorer health. Refer to Appendix B to see how physical health was scored.

Mediating Variable: While stress was considered an independent variable when analyzing Hypothesis 2, to analyze Hypotheses 3, I considered stress a mediating variable for the relationship between the independent (job-level) and dependent (physical health) variable.

Control Variables. In order to mitigate any health differences stemming from demographic influences, the variables I controlled for included sex, age, and race. Sex was controlled for as binary "male/female" dummy variable, age was controlled for as a continuous variable, and race was controlled for as a binary "white/non-white" dummy variable.

3.3 Method of Analysis

To analyze my three hypotheses, I used a quantitative analysis approach. I conducted a multivariate regression analysis to determine if there was a relationship between job-level and health, job-level to stress, and stress to health. This multivariate regression measures the strength

of evidence against the null hypotheses (H0). P-value evaluates the statistical significance of the results, and this study uses a P-value of 0.10. I also analyzed the correlation coefficient to see how strong the relationships were between variables.

The basic models used to test my hypothesis are:

Hypothesis 1: $Health = \beta_0 + \beta_1 \text{joblevel} + \varepsilon$

Hypothesis 2: $Health = \beta_0 + \beta_1 \text{stress} + \mu$

Hypothesis 3: $Health = \delta_0 + \delta_1 \text{joblevel} + \delta_2 \text{stress} + \varepsilon$

The goal of the regression analysis is to see if there is a relationship between job level and physical health of employees (Hypothesis 1), if stress is related to the physical health of employees (Hypothesis 2), and determine how a person's stress mediates the relationship between job level and physical health of the employees (Hypothesis 3).

To quantify stress, the Likert scale for stress dimensions in the survey was translated into a numerical value. Each participant was then assigned an aggregate average of their overall stress based on the four stress dimensions. Refer to Appendix B for coding for both health and stress values.

3.4 Appropriateness of methodology

Strengths

Due to lack of research on the direct relationship between job-level and physical health, creating my own data collection tool was necessary. In addition to lack of data, the unique nature of a person's job and health situations also require that data be collected through individual responses, which I was able to achieve through my survey. Using the survey, I was able to gain

measurable data from a large pool of participants who all have previous work experience. Since I collected data from a masters program, I was able to access participants with varying backgrounds and job experiences while somewhat controlling for large age-variations that might naturally impact their health. The ease of data collection as well as access to individual information from each participant was a strength of my methodology.

Limitations

My methodology is not without limitations. As with any self-reported survey, it is difficult to control for biases. Participants might not be able to self-evaluate correctly, especially regarding health and when internally comparing their current and former jobs. While a participant will be responding to organizational stress related to their current job, previous experiences of stress in former jobs might act as an anchoring bias for their present-day responses. Additionally, the younger sample population might help control for varying health factors that are due to natural aging, the low average age of participants could limit corporate experience and thus exposure to stress, limiting the potential variety of responses.

4.0 Results

This section outlines the results from the study. Section 4.1 displays the descriptive statistics. Section 4.2 displays the regression analysis and Section 4.3 includes the evaluation of my three hypotheses. Section 4.4 displays the summary and results of control variables used.

4.1 Descriptive Statistics

Descriptive statistics for the independent, dependent, and mediating variables were generated to evaluate the composition of the sample size. This included the mean and standard deviation for job-level, health scores, demographic information, and average stress of the

participants. By using these descriptive statistics to better understand the sample population, I was able to see how any potential limitations of the sample could explain the results of the study. These findings are summarized in Table 5.

Table 5 Descriptive Statistics of All Variables

	Mean	**Std. Deviation**	**Minimum**	**Maximum**	**Maximum Possible**
Independent Variable					
Job Level	0.42	0.18	0.15	0.86	1.0
Dependent Variables					
Sum Health	4.98	3.47	0	15	28
Total Experience	4.18	1.90	0	7	7
Mediator Variable					
Average Overall Stress	1.44	0.45	0.55	2.5	4
Control Variables					
Non-White	0.12	0.32	0	1	1
Male	0.56	0.50	0	1	1
Age	29.67	4.02	24	37.5	n/a

4.2 Regression Analysis

A regression analysis was used to evaluate the relationship between job level, stress, and health for each of the three measures of health. For each measure of health, two regressions were run: the first regression was performed using job level and health (Column 1), and the second regression added stress (Column 2). Tables 6 and 7 below summarize the results.

Table 6: Aggregated Health Experience (Sum of Negative Non-Chronic Health Incidences and Intensity:"SumHealth")

		1	2
Job Level	Coefficient Std. Error	0.14 2.74	-0.79 2.46
Average Stress	Coefficient Std. Error		3.32* 1.01
Age	Coefficient Std. Error	0.32* 0.12	0.25* 0.11
Male	Coefficient Std. Error	-2.45* 1.01	-2.48* 0.90
Non-White	Coefficient Std. Error	1.65 1.52	1.66 1.36
Intercept	Coefficient Std. Error	-3.43 3.72	-5.65 3.39
R^2		0.24	0.41

* p value < 0.10

Table 7: Total Experience of Non-Chronic Health Symptoms

		1	2
Job Level	Coefficient Std. Error	0.09 1.63	-0.23 1.60
Average Stress	Coefficient Std. Error		1.14* 0.66
Age	Coefficient Std. Error	0.14* 0.07	0.11 0.07
Male	Coefficient Std. Error	-0.52 0.60	-0.53 0.58
Non-White	Coefficient Std. Error	-0.58 0.91	-0.57 0.89
Intercept	Coefficient Std. Error	0.44 2.21	-0.32 2.20
R^2		0.10	0.17

* p value < 0.10

4.3 Evaluation of Hypotheses

Hypothesis 1 Results. My first hypothesis stated there would be a negative relationship between job level and physical health. While the regression coefficient between health and job level is positive for both measures of health (indicating an increase in job level is related to poorer health), the p-value of these regressions were not less than 0.10, therefore the results are not significant. Based on my results, my first hypothesis is not supported.

Hypothesis 2 results. My second hypothesis stated that higher stress negatively impacts physical health of the employee. This hypothesis was supported by my results. For both measures of health, stress was positively related to increased health scores. This indicates that when the average stress of the employee increases, there is a significantly higher prevalence of negative health symptoms.

Hypothesis 3 results. My third hypothesis looked at how stress acted as a mediator to the relationship between job level and physical health. Because I found no significant relationship between job level and physical health, Hypothesis 3 is also not supported. A mediating variable does not explain a relationship between and independent and dependent variable if that relationship is not statistically significant.

4.4 Summary of Control Variables Used

Most variables that I controlled for yielded statistically insignificant results. None of these controls affected the results of the study, however it is interesting to note that certain demographic characteristics did yield statistically significant results within the regression model.

Age. For both ways health was measured, the results prove there is a significant relationship between age and health. Due to the positive coefficient, the results indicate that as age increases, the prevalence of negative health symptoms also increases. See results in Table 6 and Table 7.

Sex. When analyzing health using the SumHealth measure, the results indicate there is a significant relationship between not only age, but between sex and health as well. With the presence of a negative coefficient, this indicates that males report significantly lower health than females. Refer to Table 6 for results.

5.0 Discussion

Based on the results of my study, there is no significant relationship between job-level and physical health of the employee. Because this significant relationship does not exist, there is no way to evaluate how stress acts as a mediating variable between job-level and physical health. These results contradict what I was expecting to find, but it is important to note that there is still a possibility of a relationship between job-level and physical health. It is possible that the small sample size of my study hindered the statistical significance of this relationship. In addition, the relatively young age of my sample could have hindered the study. These part-time master students might be high enough in an organization yet to provide enough variety in job level, as the average job level of the sample was at the 40^{th} percentile of the company and the median was 37.5%. While there is still variation presence (18%), this might not be enough to accurately gauge responses across company hierarchies. It is possible that the relationship between job-level and physical health is not as linear as I expected, and having a young sample who has not had enough career experience or time to work in higher level corporate positions might have limited my ability to evaluate physical health as it is related to higher job levels. In addition,

while aiming for a younger average sample was intentional to help control for natural aging effects on health, this also could have effected the results by limiting the accumulation of adverse non-chronic health symptoms experienced, since it is widely accepted that usually younger people tend to have less health problems than older people. My study does also support this theory, as age was a significant predictor of higher health scores (and health scores indicate more adverse health symptoms).

5.1 Implications of Research

While my results challenge my first hypothesis, I was able to reproduce findings regarding stress and its relationship to physical health that other researchers have concluded. My results show that there is a significant relationship between stress and health. The more stress that was reported lead to higher health scores, indicating more incidences or greater intensity of adverse health symptoms. It is because of this strong relationship between stress and health, and the common belief that relative to other corporate jobs, higher level jobs tend to have higher stress, that one may find with a broader sample size there is still a possibility of proving a significant relationship between job-level and physical health.

However, I believe the primary takeaway of this study is the importance for employers to provide stress-relief resources to employees. Improving organizational stress can help reduce health problems in employees, as shown by my study. Having a healthy workforce is closely associated with the ability to work and be productive. Some companies have already been implementing health and wellness programs that have reduced wasted productivity, sick days, and improved its bottom line. For example, General Motors implemented a health and wellness program and reported a 40% decrease in lost time and 60% decrease in accident and sickness

benefits as a result (Cooper, 2014). Knowing there is a significant relationship between organizational stress and physical health can help organizations better understand how to design a successful wellness program for its employees.

5.2 Future Areas of Research

While this study's results were not supportive regarding the relationship between job level and physical health, there is still opportunity to investigate this relationship. With the limited sample size and demographic variety of my sample, I am unwilling to claim this is entirely representative of the corporate population. I believe if a future researcher has access to a larger variety of employees at different job levels, the results could more clearly define a relationship between the independent and dependent variables. Studying the relationship between job level, health, and stress within a single organization could help limit scope creep for the research and allow for more participation in the study if that organization chooses to endorse it amongst its employees. Then future researchers could attempt to replicate the study amongst other organizations.

6.0 Conclusion

in conclusion, this thesis posed two questions: How is job level related to the physical health of the employee? If it is, is stress an explanation for this relationship? The literature review highlighted the current understanding that organizational stress on its own significantly impacts the health of employees, but failed to delineate a relationship between how job level impacted the health of the employee in that position. This thesis hypothesized that an increase in job level was negatively related to good health for the employee, and that stress acted as a

mediator for this relationship. This thesis also hypothesized that stress is negatively related to the physical health of the employee, meaning that higher stress levels deteriorates health. This relationship between stress and health has been widely studied and conclusive, however I wanted to replicate this relationship for my study to ensure it applied to my sample.

The only hypothesis that was supported was that stress was negatively related to physical health. The other hypotheses were not supported, with multiple factors of the study potentially contributing to these results as detailed in the Discussion section. I believe that the understanding of how various organizational factors, whether it is job level or overarching organizational stress, are related to health of the employee is important for the employee and employer to understand. My results caused me to wonder whether conducting a similar study with a more diverse sample size would yield conclusive results, or if there truly is not a relationship between job level and physical health of the employee. Regardless, organizations would do well to invest in wellness programs to reduce stress and promote an overall healthy workforce.

Appendix A: Questionnaire

Job Questions

1. Which of the following most closely matches your **current** job title?
   - Intern
   - Entry level
   - Analyst/Associate
   - Manager
   - Senior manager
   - Director
   - Vice President
   - Senior Vice President
   - C level executive (CIO, CTO, COO, CMO, etc.)
   - President or CEO
   - Owner

2. How many levels are there in your organization?

3. What level are you at?

4. What sector would you classify our job in?
   - For-profit public
   - For-profit private
   - Government
   - Not for profit

Stress Questions

For questions 1-5, think about how often you encounter these stressors in your job. Rate yourself with the following scale for each facet of the following questions
1= Never
2= Rarely
3= Occasionally
4= Often
5= Almost Always

1. Pressure on the Job
   - Overloaded at work, unable to complete tasks during an average day
   - Too much supervision
   - Job requirements are taking their toll on your private life
   - Rushed to complete work or short on time
   - Too much red tape (excessive bureaucracy or adherence to rules and formalities)

2. Work Overload Stress
    - Can't consult with others on projects
    - Co-workers are inefficient
    - Often take work home to complete
    - Responsible for too many people/projects
    - Shortage of help at work

3. Problem of Job Security
    - Fear of being laid off or fired
    - Worry about poor pension
    - Concerned about low wages
    - Could be fired without cause

4. Job Barrier Stress
    - Hope for advancement or raise is limited
    - Sex/age discrimination exists at job
    - Not suited to job
    - Work has no personal meaning
    - Work goes unrecognized

5. How many hours do you typically spend at work per week (on average)?
    - 30-39
    - 40-49
    - 50-59
    - 60+

6. How many hours do you typically spend doing work remotely in addition to time spent at work (i.e. bringing work home)?
    - 0-3
    - 4-7
    - 8-12
    - 13+

7. How many direct reports do you oversee?
    - 1-5
    - 6-10
    - 11-20
    - 21-30
    - 30+

Health-Related Questions

Questions:

1. Have you experienced any of these in the last three months: headache, muscle tension or pain, chest pain, fatigue, upset stomach, sleep problems, low energy?
    - Yes
    - No
2. To what intensity? Please choose the answer that best describes each symptom in the last three months (No Noticeable Symptoms, Mild, Moderate, Severe, Very Severe)
    - Headache
    - Muscle Tension or Pain
    - Chest Pain
    - Fatigue
    - Upset Stomach
    - Sleep Problems
    - Low Energy
3. Are any of these symptoms/illnesses chronic? (i.e. pre-existing condition, underlying health condition)
    - Headache
    - Muscle Tension or Pain
    - Chest Pain
    - Fatigue
    - Upset Stomach
    - Sleep Problems
    - Low Energy

4. During the last three months, how many times a week were you physically active for 30 or more minutes at a time?
    - 0-1
    - 2-3
    - 4-5
    - 6+
5. On average over the last three months, how many hours of sleep do you get a night?
    - 0-3 hours
    - 4-5 hours
    - 6-7 hours
    - 8+ hours
6. Would you say in general your health is:?
    - Excellent
    - Very Good
    - Good
    - Fair
    - Poor
    - Don't know
    - Prefer not to say

Demographic Questions

What is your age?

- 24 or under
- 25-30
- 30-35
- 35-40
- 40-45
- 45-50
- 50-55
- 55+

What is your gender?

- Female
- Male
- Prefer not to say

What is the highest level of education you have completed?

- Grammar school
- High school or equivalent
- Vocational/technical school (2 year)
- Some college
- Bachelor's degree
- Master's degree
- Doctoral degree
- Professional degree (MD, JD, etc.)
- Other: _____

- How would you classify yourself?
- Arab
- Asian/Pacific Islander
- Black
- Caucasian/White
- Hispanic
- Indigenous or Aboriginal
- Latino
- Multiracial
- Would rather not say

What is your current marital status?

- Divorced
- Living with another
- Married
- Separated
- Single

- Widowed
- Would rather not say

Employment status- are you currently...?

- Employed for wages
- Self-employed
- A student
- A homemaker
- Retired
- Unable to work
- Out of work and looking for work
- Out of work but not currently looking for work

What is your current annual income in US dollars?

- Less than $10,000
- $10,000 to $19,999
- $20,000 to $29,999
- $30,000 to $39,999
- $40,000 to $49,999
- $50,000 to $59,999
- $60,000 to $69,999
- $70,000 to $79,999
- $80,000 to $89,999
- $90,000 to $99,999
- $100,000 to $149,999
- $150,000 or more
- Prefer not to say

Appendix B: Variable Data Coding

Variable	Sub Variable	Code	Definition	Notes
Job Level		N/A	Numerical Value	
Average Overall Stress	Pressure on the job	0	Never	For each sub variable, an overall numerical average was assigned as the participants "Average Overall Stress" score based on the survey responses for each sub variable.
		1	Rarely	
		2	Occasionally	
		3	Often	
		4	Almost Always	
	Work Overload Stress	0	Never	
		1	Rarely	
		2	Occasionally	
		3	Often	
		4	Almost Always	
	Job Insecurity Stress	0	Never	
		1	Rarely	
		2	Occasionally	
		3	Often	
		4	Almost Always	
	Job Barrier Stress	0	Never	
		1	Rarely	
		2	Occasionally	
		3	Often	
		4	Almost Always	
Total Health Experience	Headache	0	Have Not Experienced	For each participant, the sum of all 7 sub variables was assigned as their "Total Health Experience" score
		1	Have Experienced	
	Muscle Tension or Pain	0	Have Not Experienced	
		1	Have Experienced	
	Chest Pain	0	Have Not Experienced	

		1	Have Experienced	
	Fatigue	0	Have Not Experienced	
		1	Have Experienced	
	Upset Stomach	0	Have Not Experienced	
		1	Have Experienced	
	Sleep Problems	0	Have Not Experienced	
		1	Have Experienced	
	Low Energy	0	Have Not Experienced	
		1	Have Experienced	
Sum Health Experience	Headache	0	Have Not Experienced	For each participant, a "Sum Health" score was assigned by multiplying each sub variable's score for experience, intensity, and chronic and aggregating the results for each sub variable
		1	Have Experienced	
		0	Intensity - No Noticeable Symptoms	
		1	Intensity - Mild	
		2	Intensity - Moderate	
		3	Intensity - Severe	
		4	Intensity - Very Severe	
		0	Chronic	
		1	Not Chronic	
	Muscle Tension or Pain	0	Have Not Experienced	
		1	Have Experienced	
		0	Intensity - No Noticeable Symptoms	
		1	Intensity - Mild	
		2	Intensity - Moderate	
		3	Intensity - Severe	
		4	Intensity - Very Severe	
		0	Chronic	
		1	Not Chronic	
	Chest Pain	0	Have Not Experienced	
		1	Have Experienced	

		0	Intensity - No Noticeable Symptoms	
		1	Intensity - Mild	
		2	Intensity - Moderate	
		3	Intensity - Severe	
		4	Intensity - Very Severe	
		0	Chronic	
		1	Not Chronic	
	Fatigue	0	Have Not Experienced	
		1	Have Experienced	
		0	Intensity - No Noticeable Symptoms	
		1	Intensity - Mild	
		2	Intensity - Moderate	
		3	Intensity - Severe	
		4	Intensity - Very Severe	
		0	Chronic	
		1	Not Chronic	
	Upset Stomach	0	Have Not Experienced	
		1	Have Experienced	
		0	Intensity - No Noticeable Symptoms	
		1	Intensity - Mild	
		2	Intensity - Moderate	
		3	Intensity - Severe	
		4	Intensity - Very Severe	
		0	Chronic	
		1	Not Chronic	
	Sleep Problems	0	Have Not Experienced	
		1	Have Experienced	
		0	Intensity - No Noticeable Symptoms	
		1	Intensity - Mild	

		2	Intensity - Moderate	
		3	Intensity - Severe	
		4	Intensity - Very Severe	
		0	Chronic	
		1	Not Chronic	
	Low Energy	0	Have Not Experienced	
		1	Have Experienced	
		0	Intensity - No Noticeable Symptoms	
		1	Intensity - Mild	
		2	Intensity - Moderate	
		3	Intensity - Severe	
		4	Intensity - Very Severe	
		0	Chronic	
		1	Not Chronic	
Race		0	White	
		1	Non-White	
Sex		0	Female	
		1	Male	
Age		N/A	Numerical Value	

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